

Merrimack Valley Planning Commission
Scope of Work July 1, 2018 to June 30, 2019
as Upper North Shore Regional Service Provider to Massachusetts Bays National Estuary Program

The Massachusetts Bays National Estuary Program's Workplan for Federal Fiscal Year 2018 focuses on the following desired outcomes for the Bays:

- Sustainable National Estuary Program
- Improved habitat continuity and hydrology
- Resilient coastal habitat, including implementation of nature-based coastal protection measures
- Restored natural communities
- Improved water quality
- Robust interagency and interdisciplinary collaboration and partnerships
- Well-informed, multisector input to decisionmaking, including contributions from underserved communities.

These outcomes are based on the Goals, Strategies, and Outcomes approved by MassBays' Management Committee for its Comprehensive Conservation and Management Plan (CCMP).

MVPC will implement the programs and projects below to contribute toward these overarching outcomes, utilizing approaches and partnerships specific to the Upper North Shore region. A Regional Coordinator (RC) retained by MVPC will convene a Local Governance Committee (LGC) for the Upper North Shore (8 Towns and the Great Marsh Coalition, or 8TGM), as advisors to the work described here.

Workplan tasks

Outcome: Sustainable NEP

Task 1	Solicit and provide comments on Revised CCMP and Attachments	
Description/Objective	MassBays Central Staff will complete draft and final versions of the Revised CCMP (pdf and online), subject to timely review and approval by EPA	
MVPC Actions	Deliverables	Timing (Q1-4)
Facilitate LGC review of draft CCMP	Meeting date(s), and attendee list(s).	Q1
Distribute announcement of availability and call for comments provided by Central Staff	List of audiences/networks contacted.	Q2
Provide input to Communications, Finance, and Monitoring Plans	Participate in at least one Subcommittee to the Management Committee tasked with preparing Attachments to the CCMP	Q1
Provide comments on CCMP to facilitate its long-term implementation in the Region	Written comments submitted	Q2

Task 2	Reporting for EPA	
Description/Objective	Reporting to MassBays Central Staff, engaging LGCs & regional stakeholders; promoting MassBays in local communities; attending staff and management committee/ subcommittee meetings; assisting the LGC with meetings and activities; and addressing requests for technical assistance or outreach.	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Maintain workflow according to scope of work	Reports and deliverables to MassBays central staff	monthly
Provide updates to MC	Quarterly reports to MassBays central staff, coinciding with MC meetings	Q1-4
Participate in MassBays MC and RC meetings	Attendance and participation in meetings	bimonthly
Participate on at least one MC Subcommittee	See Task 1	ongoing
Seek input from 8TGM on progress and proposed workplan	Proposed FFY2019 workplan	Q4
Represent MassBays in regional associations and societies	List of associations and societies where MassBays is represented	Q4
Promote MassBays in local community settings	List of presentations and publications	Q4

Outcome: Well-informed, multi-sector input to decisionmaking

Task 3	Provide region-specific education and outreach to inform and educate the public and stakeholders	
Description/Objective	Communicate about Upper North Shore-based activities to the public, including LGC members and other partners, featuring MassBays' support. Project descriptions will be disseminated via presentations, newsletters, and websites. All references to funding will cite "Massachusetts Bays National Estuary Program" and include relevant EPA grant number(s) and a link to massbays.org.	
CWA Core Program	Protecting coastal waters through the National Estuary Program	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Prepare and provide presentations, articles, etc.	List of publications and presentations by name, venue or publication, and date	Q4
Update 8TGM webpage references to MassBays as needed	Website urls	Q1
Provide regular reporting on progress under scope of work	Quarterly report for MC quarterly meetings	Q1-Q4

Task 4	Great Marsh Symposium	
Description	Contribute to planning and implementing a Sea Level Rise Symposium on issues and projects happening in the Great Marsh	
Partners	CZM, Great Marsh Coalition	
Actions	Deliverable	Timing (Q1 - 4)
Assist in organizing and hosting the Symposium	Symposium agenda, including MassBays' logo, new subscribers to MassBays newsletter	Q2

Outcome: Improved Water Quality

Task 5	Water Quality in the Lower Merrimack River and Estuary	
Description	Upper North Shore RC will provide technical support and assistance to build capacity of local organizations for water quality monitoring.	
Partners	Merrimack River Watershed Council, Eight Towns and the Great Marsh Committee, EPA Region 1, City of Lowell, others	
MVPC Actions	Deliverables	Timing (Q1-4)
Consult with organizations working in the Lower Merrimack River	determine gaps in capacity for documenting water quality in the Lower Merrimack River	Q1
In consultation with partners, develop a monitoring plan for the lower Merrimack and estuary	draft monitoring plan	Q3
Assist MRWC and others in securing funding for water quality monitoring to provide new data	list of funding sources considered and pursued, letter(s) of support provided.	Q4

Task 6	Preliminary Microplastic Sampling in the Great Marsh Estuary Waters	
Description	The shellfish industry in the Great Marsh is of great national importance and may be suffering from the effects of microplastic pollution. Testing will be performed in the freshwater inputs (stormwater and riverine) and saltwater (ocean) and in the estuarine waters of the Great Marsh.	
Partners	Sustainable Cape Ann, Center for Coastal Studies, Boston University, Eight Towns and the Great Marsh Committee	
MVPC Actions	Deliverables	Timing (Q1-4)
Design sampling and testing plan	Map of sampling locations	Q1
Secure funding /volunteers	Contract/list of partners	Q1
Collect samples and identify microplastic volumes and report out	Report	Q2

Outcome: Improved water quality via source control

Task 7	Greenscapes Coalition	
Description	Provide member communities with Stormwater Outreach in accordance with EPA Stormwater permit	
Partners	Salem Sound Coastwatch, Ipswich River Watershed Association, Merrimack River Watershed Council, local communities of the upper north shore.	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Solicit communities to join or continue in the Greenscapes Program	List of Upper North Shore member communities	
Greenscapes outreach materials	List of presentations, documents, or other products, audience reached (estimate)	

Outcome: Resilient coastal habitat

Task 8	Promote Low-Impact Development	
Description	Promote and implement Low Impact Development (LID) and stormwater green infrastructure in MassBays communities.	
Partners	Watershed associations, municipalities, CZM, DEP, NRCS	
MVPC Actions	Deliverable	Timeline (Q1-4)
Provide technical assistance and grant support	List of LID education & outreach efforts	Q4
Provide grant proposal scoping and writing support	Documentation of support provided	ongoing
Provide support for efforts to install LID and stormwater management projects	Implementation of at least one LID demonstration site, subject to funding and local opportunities.	Q4

Task 9	Natural Thin-layer Deposition Assessment	
Description	Assist with monitoring of a naturally occurring thin-layer deposition event on the Great Marsh	
Partners	CZM, Town of Essex, University of New Hampshire, Boston University	
Actions	Deliverable	Timing (Q1 - 4)
Support evaluation and document results for outreach efforts.	Presentation and report with recommendations	Q4

Task 10	Evaluation of Marsh Impoundment Solutions for SLR mitigation in the Great Marsh (Upper North Shore)	
Description	Investigation of extent and severity of artificially impounded or excessively draining areas throughout the Great Marsh and piloting potential solutions	
Partners	U.S. Fish and Wildlife Service, University of New Hampshire, Mass Audubon	
MVPC Actions	Deliverable	Timeline (Q1-Q4)
Identify funding sources	Successful grant application	Q1 – Q4
Identify sites for pilot actions	List/map of sites	Q1, Q2
Runnel development and monitoring	Photodocumentation, reports on findings and recommendations	Q1-Q4
Ditch plug removal and monitoring		

Task 11	Marsh Edge Erosion Monitoring	
Description	Monitoring selected creek and channel banks for erosion and causes of erosion throughout the Great Marsh	
Partners	Boston University	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Annual Monitoring of preselected erosion sites in Essex Bay, Plum Island Sound, and Merrimack River	Interim report	Q2
	Final report	Q4

Outcome: Restored Natural Communities

Task 12	Coordinate and Implement Restoration of Eelgrass in Plum Island Sound	
Description	Establish one or more eelgrass sites in Plum Island Sound and Merrimack River	
Partners	Boston University, Parker River National Wildlife Refuge, MA Division of Marine Fisheries, Town of Newburyport	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Transplant eelgrass in PI Sound in PRNWR -	Photo Documentation	Q1
Monitor and maintain eelgrass site in Essex Bay -	Interim Report	Q1/Q2

Transplant eelgrass in Joppa Flats area of Merrimack River -	Photo documentation	Q1/Q2
Monitor eelgrass transplant success -	Interim Report	Q2

Task 13	Shellfish Restoration	
Description	Pilot cultivation and deployment of blue mussels	
Partners	Massachusetts Oyster Project, student Shark Club (volunteers), DMF, UMass Amherst	
MVPC Actions	Deliverable	Timing (Q1 - 4)
extract opportunistic mussels from upwellers for grow-out at UMass Field Station, Gloucester (UNS)	photodocumentation, estimated yield of mussels : oysters	Q1
Secure permits for oyster and/or mussel deployment (UNS, MOP)	DMF permits	Q2
Distribute shellfish into the estuary (MOP, UNS)	map of locations, estimated density	Q2
Monitor success of shellfish establishment (MOP, UNS)	summary report	Q4
Conduct public outreach (all)	photodocumentation, any press or outreach materials	ongoing

Task 14	Invasive Green Crab Monitoring (Upper North Shore,	
Description	Selected data collection (temp., depth, salinity, current, substrate, etc) on green crab habitat at monitoring sites to assist in data interpretation of 2014-2018 for management plan development	
Partners	Boston University, Ma Division of Marine Fisheries, Green Crab R&D, Communities of the Great Marsh	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Protocol updated	Approved EPA QAPP	Q1
Collect data at sites in Essex Bay, Plum Island Sound, and Merrimack River	Map of sites, summary of findings including recommendations re: continuation	Q1, Q3

Task 15	Great Marsh <i>Phragmites</i> Management and Control	
Description	Map and treat <i>Phragmites</i> on the marsh platform	
Partners	Parker River National Wildlife Refuge, towns of the Great Marsh, Essex County Greenbelt Association, property owners	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Identify <i>Phragmites</i> density and extent and estimated treatment type	List/report	Q1
Obtain funding for treatments	Funding Contract	Q1
Coordinate with partners for donated efforts and equipment	List of partners	Q1
Conduct treatment	Map of treatment sites	Q2

Task 16	Marine Invasive Species Monitoring	
Description	Monthly monitoring of marine invasives as part of state MIMIC at pre-selected and pre-monitored sites in Essex, Gloucester, and Ipswich	
Partners	MA Coastal Zone Management, Eight Towns and the Great Marsh Committee	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Monthly marine invasive monitoring May-October	data submitted to CZM	Q1, Q2

Task 17	Pepperweed Management and Control	
Description	Treat selected pepperweed sites in Merrimack River, Newbury, and Ipswich marsh	
Partners	Mass Audubon, Parker River National Wildlife Refuge, volunteers, MA NH ME Invasive Group	
MVPC Actions	Deliverable	Timing (Q1 - 4)
Prioritize treatment areas (beaches, wharves, roadways and wetlands)	List/map of prioritized sites	Q1
Working with partners, treat prioritized areas	Map of known pepperweed sites with list of areas monitored with status (presence-absence and removal actions)	Q3

Outcome: Robust interagency and interdisciplinary collaborations and partnerships

Task 18	Represent MassBays to relevant networks
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Description	Convene and provide input to existing working groups on topics relevant to MassBays' desired outcomes	
Partners	Entities and organizations involved with environmental and coastal activities in the Upper North Shore and Great Marsh estuaries, including but not limited to MAPC North Shore Task Force, the Great Marsh Coalition and Coastal Restoration subcommittee, Essex National Heritage Commission, Greenscapes North Shore, Plum Island-Long Term Ecological Research Group, Parker, Ipswich, Essex River Restoration Partnership, North Shore Conservation Commission Network, Great Marsh Legislative Delegation, Merrimack River Beach Alliance, Great Marsh Assembly, MA/NH Merrimack Valley Conservation Workgroup, Merrimack River GRP, MA/ME/NH Invasives Workgroup, Essex River Anadromous Fish Assessment, PIE River Restoration, Marsh Erosion Task Force, Green Crab Marketing Work Group, and Merrimack River Watershed Council.	
MVPC Actions	Deliverables	Timing (Q1 - 4)
Assist the Merrimack River Watershed Council in setting priorities for the lower (tidal) portion of the Merrimack River, especially by connecting them with municipal staff (Amesbury, Salisbury, Newbury and Newburyport) and decisionmakers.	Quarterly reports on progress	Q1-4
Convene and conduct outreach to stakeholders, via presentations, newsletters, websites, etc.	MassBays staff cc'd/included on distribution lists for updates and invitations	ongoing

Outreach and Communication Plan

MVPC and the Eight Towns and the Great Marsh Committee will ensure all pertinent work products produced by MassBays central staff and pertinent projects produced by the Upper North Shore LGC and other MassBays sub-regions will be displayed or linked on the Eight Towns and the Great Marsh website and the MVPC website; including but not limited to RSP published reports and studies, projects completed through the MassBays Healthy Estuaries grants, MassBays Central Staff and MassBays Management Committee reports, and whenever possible, efforts of project partners. Said projects and reports will be referenced in/at stakeholder meetings and activities where appropriate. MVPC and Eight Towns and the Great Marsh will make sure MassBays logo type will be used on all pertinent documents, maps, and websites. Written and verbal credit will be given to the MassBays Program from written documents and from verbal communication where appropriate. In addition MassBays projects and programs, as developed under the local governance committee, will be displayed in MVPC quarterly newsletters and annual report. The Regional Coordinator will report as a representative of the MassBays National Estuary Program at workshops, conferences, meetings, in news articles, and at other events.